

# SEQUENCE LISTING

<110> Dhugga, Kanwarpal S.  
Wang, Haiyin

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Ala	Tyr	Leu	Leu	Asn	Leu	Asp	Cys	Asp	His	Tyr	Ile	Asn	Asn	Ser	Lys
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Val	Phe	Arg	Arg	Gln	Ala	Leu	Tyr	Gly	Tyr	Asp	Ala	Pro	Lys	Thr	Lys
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 <212> PRT  
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Ala Glu Glu Val Val Glu Asn His His Thr Ala Gly Gly Leu Arg
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Glu Arg Val Thr Met Gly Ser His Leu Asn Asp Arg Gln Asp Glu Val
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Ser His Ala Arg Thr Met Ser Ser Leu Ser Gly Ile Gly Ser Glu Leu
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Lys Ala Gln Pro Pro Val Glu Glu Gln Ile Met Asp Glu Lys Asp
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His	Gly	Trp	Arg	Ser	Ile	Tyr	Cys	Ile	Pro	Lys	Arg	Ala	Ala	Phe	Lys
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Glu	Leu	Asn	Asn	Val	Ala	Ser	Leu	Trp	Phe	Met	Ser	Leu	Phe	Ile	Cys
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Val Ser Thr Val Asp Pro Leu Lys Glu Pro Pro Leu Ile Thr Ala Asn  
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Thr Val Leu Ser Ile Leu Ala Val Asp Tyr Pro Val Asp Lys Val Ser  
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														Val

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Leu Pro Ala Ile Cys Leu Leu Thr Asn Lys Phe Ile Ile Pro Glu Ile				
865	870	875		880
Ser Asn Tyr Ala Gly Met Phe Phe Ile Leu Leu Phe Ala Ser Ile Phe				
	885	890		895
Ala Thr Gly Ile Leu Glu Leu Arg Trp Ser Gly Val Gly Ile Glu Asp				
	900	905		910
Trp Trp Arg Asn Glu Gln Phe Trp Val Ile Gly Gly Thr Ser Ala His				
	915	920		925
Leu Phe Ala Val Phe Gln Gly Leu Leu Lys Val Leu Ala Gly Ile Asp				
	930	935		940
Thr Asn Phe Thr Val Thr Ser Lys Ala Ser Asp Glu Asp Gly Asp Phe				
	945	950		955
Ala Glu Leu Tyr Val Phe Lys Trp Thr Ser Leu Leu Ile Pro Pro Thr				
	965	970		975
Thr Val Leu Val Ile Asn Leu Val Gly Met Val Ala Gly Ile Ser Tyr				
	980	985		990
Ala Ile Asn Ser Gly Tyr Gln Ser Trp Gly Pro Leu Phe Gly Lys Leu				
	995	1000		1005
Phe Phe Ser Ile Trp Val Ile Leu His Leu Tyr Pro Phe Leu Lys Gly				
	1010	1015		1020
Leu Met Gly Arg Gln Asn Arg Thr Pro Thr Ile Val Ile Val Trp Ser				
	1025	1030		1035
Ile Leu Leu Ala Ser Ile Phe Ser Leu Leu Trp Val Lys Ile Asp Pro				
	1045	1050		1055
Phe Ile Ser Pro Thr Gln Lys Ala Ala Ala Leu Gly Gln Cys Gly Val				
	1060	1065		1070
Asn Cys				

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25

<210> 49  
 <211> 3969  
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<400> 49

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cgaggagt	aggggaggaa	cgatggagg	cgagcgccg	gctggtggcc	ggctccacca	180
accgcaca	gctcgtctc	atccgcccgc	acggcgatcc	cgggccgaag	ccgcgcggcg	240
agcagacgg	gcaggtgtgc	cagatttgcg	gcgacgagct	cgcccttgcc	ccggcggggg	300
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<210> 50
<211> 1086
<212> PRT
<213> Zea mays

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20 25 30
Glu Gln Asn Gly Gln Val Cys Gln Ile Cys Gly Asp Asp Val Gly Leu
35 40 45
Ala Pro Gly Gly Asp Pro Phe Val Ala Cys Asn Glu Cys Ala Phe Pro
50 55 60
Val Cys Arg Asp Cys Tyr Glu Tyr Glu Arg Arg Glu Gly Thr Gln Asn
65 70 75 80
Cys Pro Gln Cys Lys Thr Arg Tyr Lys Arg Leu Lys Gly Cys Gln Arg
85 90 95
Val Thr Gly Asp Glu Glu Glu Asp Gly Val Asp Asp Leu Asp Asn Glu
100 105 110
Phe Asn Trp Asp Gly His Asp Ser Gln Ser Val Ala Glu Ser Met Leu
115 120 125
Tyr Gly His Met Ser Tyr Gly Arg Gly Gly Asp Pro Asn Gly Ala Pro
130 135 140
Gln Ala Phe Gln Leu Asn Pro Asn Val Pro Leu Leu Thr Asn Gly Gln
145 150 155 160
Met Val Asp Asp Ile Pro Pro Glu Gln His Ala Leu Val Pro Ser Phe
165 170 175
Met Gly Gly Gly Lys Arg Ile His Pro Leu Pro Tyr Ala Asp Pro
180 185 190
Ser Leu Pro Val Gln Pro Arg Ser Met Asp Pro Ser Lys Asp Leu Ala
195 200 205
Ala Tyr Gly Tyr Gly Ser Val Ala Trp Lys Glu Arg Met Glu Asn Trp
210 215 220
Lys Gln Arg Gln Glu Arg Met His Gln Thr Gly Asn Asp Gly Gly Gly
225 230 235 240
Asp Asp Gly Asp Asp Ala Asp Leu Pro Leu Met Asp Glu Ala Arg Gln
245 250 255
Gln Leu Ser Arg Lys Ile Pro Leu Pro Ser Ser Gln Ile Asn Pro Tyr
260 265 270
Arg Met Ile Ile Ile Arg Leu Val Leu Gly Phe Phe Phe His
275 280 285
Tyr Arg Val Met His Pro Val Asn Asp Ala Phe Ala Leu Trp Leu Ile
290 295 300
Ser Val Ile Cys Glu Ile Trp Phe Ala Met Ser Trp Ile Leu Asp Gln
305 310 315 320
Phe Pro Lys Trp Phe Pro Ile Glu Arg Glu Thr Tyr Leu Asp Arg Leu

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785              790              795              800
Ile Tyr Cys Ile Pro Lys Arg Val Ala Phe Lys Gly Ser Ala Pro Leu
805              810              815
Asn Leu Ser Asp Arg Leu His Gln Val Leu Arg Trp Ala Leu Gly Ser
820              825              830
Ile Glu Ile Phe Phe Ser Asn His Cys Pro Leu Trp Tyr Gly Tyr Gly
835              840              845
Gly Gly Leu Lys Phe Leu Glu Arg Phe Ser Tyr Ile Asn Ser Ile Val
850              855              860
Tyr Pro Trp Thr Ser Ile Pro Leu Leu Ala Tyr Cys Thr Leu Pro Ala
865              870              875              880
Ile Cys Leu Leu Thr Gly Lys Phe Ile Thr Pro Glu Leu Asn Asn Val
885              890              895
Ala Ser Leu Trp Phe Met Ser Leu Phe Ile Cys Ile Phe Ala Thr Ser
900              905              910
Ile Leu Glu Met Arg Trp Ser Gly Val Gly Ile Asp Asp Trp Trp Arg
915              920              925
Asn Glu Gln Phe Trp Val Ile Gly Gly Val Ser Ser His Leu Phe Ala
930              935              940
Val Phe Gln Gly Leu Leu Lys Val Ile Ala Gly Val Asp Thr Ser Phe
945              950              955              960
Thr Val Thr Ser Lys Gly Gly Asp Asp Glu Glu Phe Ser Glu Leu Tyr
965              970              975
Thr Phe Lys Trp Thr Thr Leu Leu Ile Pro Pro Thr Thr Leu Leu Leu
980              985              990
Leu Asn Phe Ile Gly Val Val Ala Gly Val Ser Asn Ala Ile Asn Asn
995              1000              1005
Gly Tyr Glu Ser Trp Gly Pro Leu Phe Gly Lys Leu Phe Phe Ala Phe
1010              1015              1020
Trp Val Ile Val His Leu Tyr Pro Phe Leu Lys Gly Leu Val Gly Arg
1025              1030              1035              1040
Gln Asn Arg Thr Pro Thr Ile Val Ile Val Trp Ser Ile Leu Leu Ala
1045              1050              1055
Ser Ile Phe Ser Leu Leu Trp Val Arg Ile Asp Pro Phe Leu Ala Lys
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<210> 51
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<212> DNA
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<220>
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<400> 51
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25

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<210> 52
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<212> DNA
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<220>
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<400> 52  
ctagttgcaa tccaaaccac actcc

25